

## Solar PV – Parsons Green, Guildford

<b>Existing or Proposed Project:</b>	EXISTING – commissioned August 2003
<b>Location:</b>	Parsons Green, Guildford, Surrey GU1
<b>Owner / Developer:</b>	Apex Housing Association Group
<b>Description:</b>	Roof-integrated photovoltaic system on social housing



### Background:

Apex Housing Association created Parsons Green in an urban area of Guildford as a 100% social housing development in 2003. Eleven of the 2-3 bed houses were fitted during construction with integrated solar photovoltaic (PV) roofs.

Renewable energy consultants IT Power were brought in to design the PV systems (totalling 25.27kW<sub>p</sub>). The Parsons Green development still features on their books as part of the European Union-funded comparative study programme of PV in Social Housing ('PVISH').

The Department of Trade and Industry's (DTI) 'Domestic PV Field Trial 2' programme provided funding for almost two-thirds of the project cost. Part of the DTI funding paid for a monitoring system. Guildford Borough Council and Apex Housing Group covered the remaining third of the overall expenditure.

### Technology / Scope of Project:

The 11 homes are partially tiled with photovoltaic 'Terra Piatta' tiles made by manufacturer Pfleiderer. This is an unobtrusive technology designed to resemble typical flat roof tiles in shape and the way they overlap each other, thus reducing the visual impact on an area (in comparison with solar panels). Planning permission can also usually be more readily obtained or even avoided by use of PV tiles instead of panels in new dwellings and offices. However, conversely the slightly iridescent, blue-ish gleam of the typical solar-tiled roof sometimes also contributes to an attractive, distinctive look and has been known to affect house prices beneficially, compared to neighbouring homes with conventional roofs.

In keeping with nearly all such installations in the UK, the roof-integrated PV systems at Parsons Green are grid-linked, meaning they are connected to the conventional power network rather than charging batteries. For this reason Solar Energy Installations (now Sustainable Energy Installations), who were the contract installers, were also required to install inverters (SMA 'Sunny Boy') in order to convert the direct current electricity ('DC', used in battery-run appliances) produced by the PV tiles, to the necessary

## Importance to the South East:

In 2001, nearly 1 in 12 of houses (and over a third of all flats), in South East England were classified as social housing, i.e. rented housing owned by local authorities and registered social landlords, usually housing associations. There are therefore over a quarter of a million existing roofs on social housing in the region theoretically available for PV installations!

Roof tiles are however by their nature most suited to new developments and the housing expansion programme in the South East will provide great opportunities for including such environmentally responsible and resident-friendly technologies.

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